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Effectiveness of Home-Economics Extension Work in Reaching Farm Women

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Cooperative Extension Work in Agriculture and Home Economics

Extension Service Circular 101 April, 1929

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DISTRIBUTION: A copy of this circular has been sent to extension directors, State and assistant State home demonstration leaders, white and negro, and to agricultural college and experiment station libraries.

THE EFFECTIVENESS OF HOME-ECONOMICS EXTENSION WORK IN REACHING FARM WOMEN*

Introduction

In this circular information on home economics extension is brought together from the general studies of the effectiveness of extension teaching which have now been conducted in some 15 States. All extension of home economics subject-matter has been included regardless of whether that work was done by county home demonstration agents, agricultural agents, club agents, or specialists.

In eleven of the fifteen States home demonstration agents had been employed in the counties involved at the time of collecting the field data, for an average of six years. In two of the States the counties studied had had the services of a district home demonstration agent serving from three to four counties, while in the remaining two States the only home economics extension conducted, outside of emergency work during the war, was handled by agricultural agents with the assistance of home economics specialists.

Only one measure of the effectiveness of extension teaching is employed -- the adoption of better home economics practices by farm women. It is recognized that there are other results from extension effort such as local leaders developed and boys and girls trained.

General Information Relating to Homes Studied

That some contact had been made with a home economics extension worker, either a home demonstration agent or a specialist, was reported from 29 per cent of the 10,421 farm homes visited. (Table 1.) Women from 6 per cent of the homes had served as local leaders of some phase of the extension program. Some formal extension activity, such as a girl in club work, a meeting of the home demonstration club, or a result demonstration had been conducted in 17 per cent of the homes; an additional 16 per cent of the homes had been represented at similar activities in neighboring homes or at community centers. In those five States having home bureaus, or separate women's membership in the farm bureau, 29 per cent of the farm women interviewed either were or had been members of that organization. It will be noted that the percentages of homes having contact with extension workers and participating in extension activities are little if any greater than the percentage affiliated with organized extension groups.

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*Paper presented before the Central States Conference, Purdue University, Lafayette, Indiana, April 24 to 26, 1929.

Table 1. - General Information Relating to Farm Homes Studied in 16 Areas

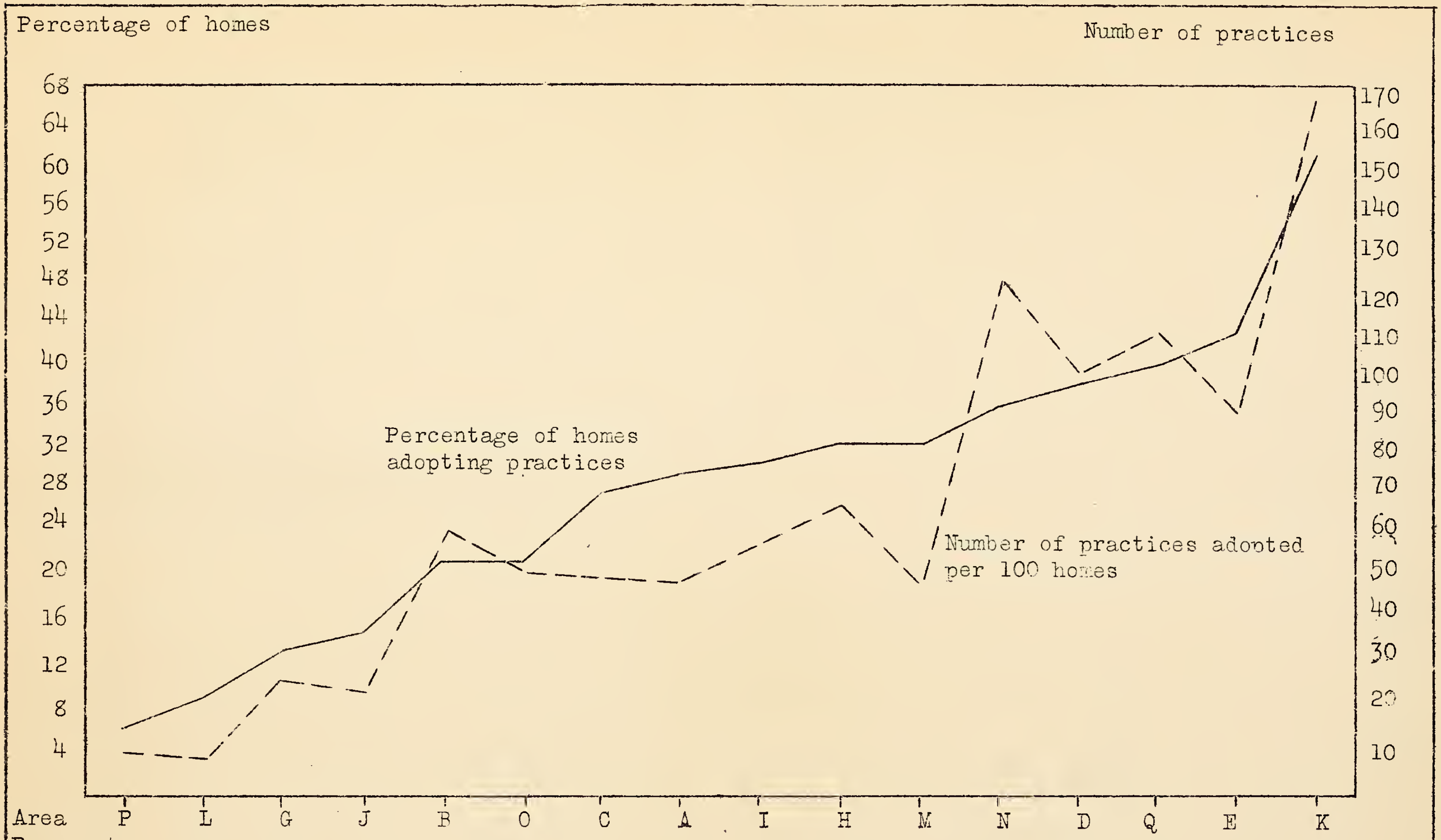
Number of records obtained	10421
Percentage of homes owned	68
Percentage of homes with telephones	52
Percentage of homes reporting contact with home economics extension worker	29
Percentage of homes having local leaders	6
Percentage of homes in which extension activities were conducted	17
Other homes attending or participating in extension activities	16
Percentage of women members of home bureau, present and past (5 areas)	29

Homes Adopting Improved Practices

The acceptance of one or more new or better practices as a part of the regular home procedure was reported for 32 per cent of the farm homes studied. About one home in three has been influenced by home economics extension to change practices. The average number of changes in practices reported was 2.28, making a total of 72 practices adopted per 100 homes. The range in percentage of homes making changes in home economics practices in the areas studied, and the variation in the numbers of practices adopted are brought out in figure 1. In those areas where the higher percentages of homes were influenced, fully as intensive work was also done as indicated by the number of practices adopted per 100 homes.

Women in the country towns and villages are frequently as much interested in the extension programs as are the women living on farms. The problems of foods, clothing, home management, and health and sanitation are about the same in village homes as in country homes. As a result the number of women with whom the home demonstration agent is trying to work is often more than twice as great as the number of farms in the county.

A limited study of 302 typical village homes in two areas reveals that 46 per cent of the village homes have changed practices due to extension teaching. (Table 2.) The rate of adoption of practices was also greater than for farm homes, being 140 per 100 village homes, as compared to 72 per 100 farm homes.



Area	P	L	G	J	B	O	C	A	I	H	M	N	D	Q	E	K
Per cent homes adopting practices.	7	10	15	17	24	24	31	33	34	36	36	40	42	44	47	65
Practices adopted per 100 homes	12	10	30	27	67	57	56	56	66	76	55	131	108	118	98	177

Fig. 1. - Variation in percentage of homes adopting home economics practices and the number of practices adopted per 100 homes.

Table 2. - Comparative Effectiveness of Extension in Reaching Farm Homes and Village Homes

Group	Number of records	Per cent homes adopting home economics practices	Number home economics practices adopted per 100 homes
Farm homes (16 areas)	10421	32	72
Village homes (2 areas)	302	46	140

Extension programs in the areas studied have apparently largely emphasized clothing and food. At least practices falling under these two subject-matter heads were reported most frequently by the farm women interviewed. Clothing practices were adopted at the rate of 24 practices per 100 homes (Table 3) followed closely by food preservation with 20 practices per 100 homes. Food preparation and nutrition each account for the adoption of 6 practices per 100 homes. There is naturally a great similarity in the home economics practices reported adopted in the various areas studied, since home problems are much the same in all parts of the country.

Table 3. - Home Economics Practices Adopted - 15 Areas.

Practice	Total practices	Practices adopted per 100 homes
Clothing	2370	24
Food preservation	1978	20
Food preparation	633	6
Nutrition	558	6
Health and sanitation	260	3
Home management	227	2
Home improvement	243	2
Miscellaneous home economics	592	6

Relative Influence of Methods Used in Home Economics Extension

The method demonstration and leader training meetings as means of teaching skills, seem to be the outstanding means of extending home economics information. At least they are credited with having influenced the adoption of 47 practices out of every 100 changed. (Table 4.) It is of course possible that the large influence of method demonstrations is more due to the large amount of emphasis placed upon it in home economics extension teaching, than to its efficiency as a teaching instrument.

The general meeting is credited with bringing about the adoption of 14 per cent of the practices changed, making a total of 61 per cent credited to these three types of meetings.

Table 4. - Relative Influence of Methods Upon Adoption of Practices
(6861 practices - 15 areas)

Method	Per cent of practices involved*
Method demonstrations and leader training meetings	47.2
General meetings	14.0
Indirect influence	8.8
Bulletins	8.2
News stories	5.0
Farm or home visits	4.5
Junior result demonstrations	4.2
Adult result demonstrations	2.9
Radio	1.4
Exhibits	1.0
Office calls	.8
Circular letters	.8
Extension schools	.6
Correspondence	.3
Study course	.2
Telephone calls	.1

Bulletins accounted for 8 per cent of the practices changed, result demonstrations, adult and junior, 7 per cent, and news stories 5 per cent. Indirect spread of information from one neighbor to another explains the adoption of about 9 per cent of the changes. This indirect influence is much less for home economics subject-matter than for agriculture. Indirect spread of information is credited with 24 per cent of the changes in agricultural practices made as a result of extension effort according to the data from these same studies.

News stories, home visits, and office calls are other important means credited with proportionately much less influence in extending home economics information than in extending agricultural subject-matter.

Exhibits and circular letters apparently have had little total influence upon the adoption of home practices, just as in the case of farm practices. The interrelationship of methods, their adaptability to different subject-matter, and their relative cost are important matters to consider in selecting teaching tools. These matters are fully discussed in U. S. Department of Agriculture Technical Bulletin 106, "Extension Methods and Their Relative Effectiveness" and U. S. Department of Agriculture Technical Bulletin 125, "Relative Costs of Extension Methods which Influence Changes in Farm and Home Practices."

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* Data corrected to basis of 100 per cent = sum of influences of individual methods.

Factors Affecting Extension of Home Economics Information

In addition to the means and agencies employed in extension teaching, there are many other factors which frequently affect extension results, among them may be listed land tenure, distance from extension office, character of roads, educational training, age, participation in extension activities, and contact with extension workers.

Tenure. Two-thirds of the homes visited were those of land owners and one-third those of tenants on either a cash rent or share crop basis. Three per cent more of the tenants than of the owners reported changes in home economics practices. (Table 5.) On the basis of number of practices changed per 100 homes, the owners had a slight advantage. It is evident therefore that home economics extension programs have been equally adapted to both owner and tenant families.

Table 5. - Land Tenure in Relation to Home Economics Practices Adopted (16 Areas)

Group	Number of homes	Percentage of homes	Percentage of homes adopting practices	Number practices adopted per 100 homes
Owners	7115	68	31	73
Tenants	3306	32	34	71

Size of Farm. Upon dividing the farms studied into small, medium, and large size according to acreage, it is evident that adoption of home economics practices increases rapidly with increased size. (Table 6.) In the case of the homes on large farms, the percentage influenced to make changes is nearly 50 per cent greater than for the homes on small farms. The number of practices adopted per 100 homes is 86 per cent greater.

Table 6. - Relation of Size of Farm to the Adoption of Home Economics Practices (16 Areas)

Group	Number of farms	Average size (acres)	Percentage of homes adopting practices	Number practices adopted per 100 homes
Small	3499	51	26	51
Medium	3870	113	32	73
Large	3052	258	38	95

Distance from Extension Office. Whether the farm home is located less than or more than 10 miles from the county extension office does not seem to have made any difference in the spread of home economics practices. (Table 7.) This is equally true whether percentage of homes influenced, or the number of practices changed per 100 homes is used as a measure of accomplishment.

Table 7. - Relation of Distance of Home from Extension Office to Adoption of Home Economics Practices - (16 Areas)

Group	Number of homes	Percentage of homes	Percentage of homes adopting practices	Number practices adopted per 100 homes
0 to 10....................	4708	45	31	75
Over 10....................	5713	55	32	69

Character of Roads. The farm women living on roads which were hard surfaced or graveled made slightly more use of home economics information than did the women living on unimproved roads. (Table 8.) The advantage on the side of better roads is too small to be of any significance.

Table 8. - Character of Roads in Relation to Change of Home Economics Practices (15 Areas)

Group	Number of homes	Percentage of homes	Percentage of homes adopting practices	Number practices adopted per 100 homes
Improved roads.............	5127	52	32	78
Unimproved roads...........	4745	48	29	63

Membership in Extension Associations. In the five areas studied where farm women are organized into a definite county-wide association for the support of extension work, it is interesting to note the close relationship between membership in such an organization and change in practices. (Table 9.) Twenty-nine per cent of the farm women either were members of the home bureau or similar organizations at the time the studies were made or had been previously. Eighty-five per cent of the members and 73 per cent of the former members had put to practical use home economics information obtained from the extension service. Only 20 per cent of the women not affiliated with the county extension association had adopted practices. The number of changes made per 100 homes was nearly 10 times as great for members as for non-members. It is quite likely that similar differences exist between members and non-members of home demonstration clubs in those areas where less formal type of extension organization is followed.

Table 9. - Membership in Extension Association as Related to Adoption of Home Economics Practices - (5 Areas)

Group	Number of homes	Percentage of homes	Percentage of homes adopting practices	Number practices adopted per 100 homes
Members	732	18	85	308
Former members	431	11	73	185
Non-members	2903	71	20	32

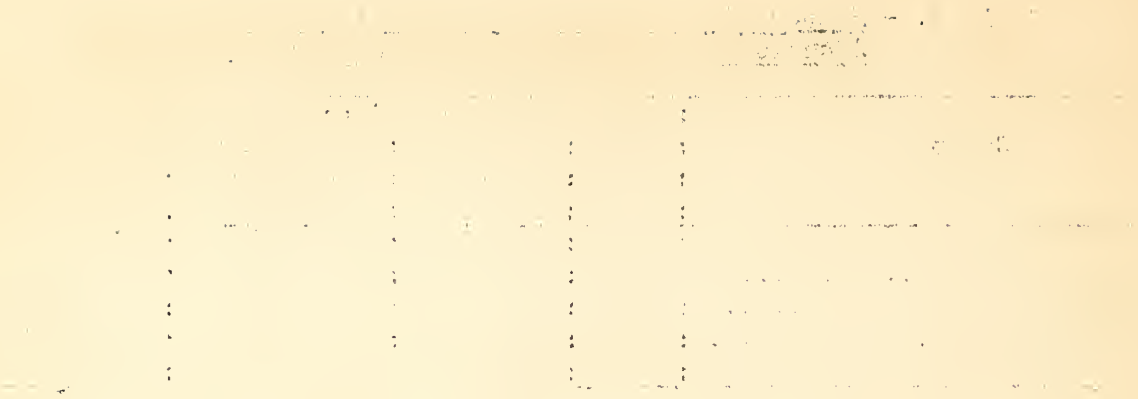
The chief reasons for withdrawing from the extension associations were inability to attend meetings regularly which accounted for nearly 24 per cent of the former members, too busy 14 per cent, disbanding of local unit, 11 per cent, and no direct benefit from membership 4 per cent. It is probable that these were also the chief reasons why non-members did not join the home bureau association.

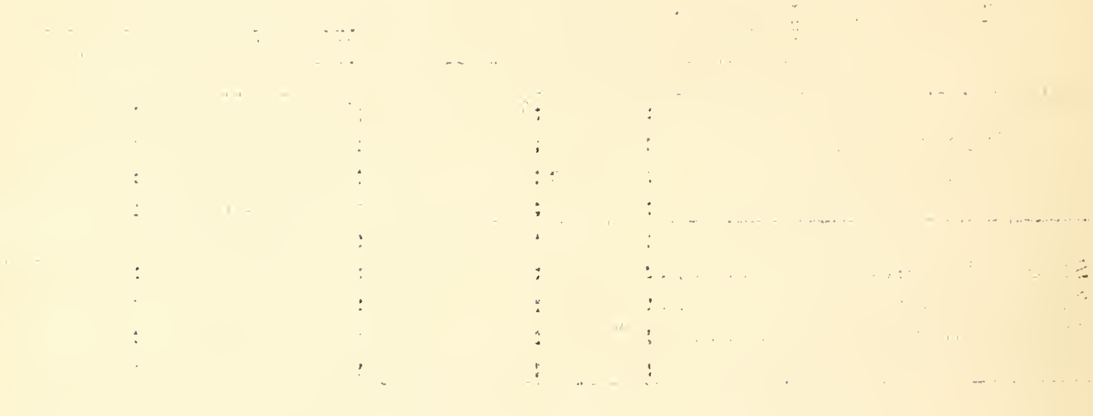
Educational Training. Information was obtained in six areas as to the formal educational training received by the farm women. As would naturally be expected there is a close relationship between amount of training and use of extension information. (Table 10.) In but four per cent of the homes had the farm women received any college training. An additional 19 per cent had attended high school, leaving 70 per cent with eighth grade schooling or less. For seven per cent of the homes either the enumerator failed to make record of educational training or there was no woman in the farm family.

Table 10. - Influence of Educational Training upon Adoption of Home Economics Practices by Farm Women - (6 Areas)

Educational training	Number of women	Percentage of homes	Percentage of homes adopting practices	Number practices adopted per 100 homes
Some college	101	4	65	215
Some high school	515	19	57	168
8th grade or less	1870	70	34	81

Sixty-five per cent of the women with some college training made use of home economics information from the extension service as compared to 57 per cent of the high school group and 34 per cent of the common school group. There is an even greater difference in the number of practices changed per 100 homes in the three groups.





Age. A higher proportion of the farm women between the ages of 31 and 45 reported the adoption of home economics practices than was true of the women in the younger and older age groups. (Table 11.) Approximately the same percentage of the women 46 to 60 years of age changed practices, as of the women 30 years and under. One in six of the women 61 years of age and older reported the use of extension information. Age alone does not seem to be an important barrier to the acceptance of new or better information relating to problems of the farm home.

Table 11. - Relation of Age of Farm Women to Adoption of Home Economics Practices - (4 Areas)

Age Group	Number of women	Percentage of homes	Percentage of homes adopting practices	Number practices adopted per 100 homes
30 years and under......	235	14	28	72
31 - 35................	211	13	41	125
36 - 40................	251	15	35	100
41 - 45................	216	13	35	90
46 - 50................	224	13	28	86
51 - 55................	136	8	27	60
56 - 60................	150	9	26	68
61 and over............	144	9	17	63

Participation in Extension Activities. Where some formal home economics extension activity had been held in the farm home the adoption of better practices was reported in 76 per cent of the cases. (Table 12.) Where members of the family had taken part in extension meetings only at neighbors and community centers, 67 per cent made changes. In the case of that large group of homes not represented in any extension activity, but 14 per cent adopted home economics practices. The number of practices changed per 100 homes was 14 times as great for the first group and 7 times as great for the second group as for the last group.

Table 12. - Participation in Home Economics Extension Activities As Related to Adoption of Practices - (7 Areas)

Group	Number of homes	Percentage of homes	Percentage of homes adopting practices	Number practices adopted per 100 homes
Homes having extension activities in home.....	557	17	76	270
Other homes participating in extension activities................	541	16	67	153
Homes not participating in extension activities	2235	67	14	16

Contact with Extension Workers. The farm women making contact with county home demonstration agents or State home economics specialists were influenced to change practices in 79 per cent of the cases. (Table 13.) This was true of but 13 per cent of the women not in personal touch with home economics extension workers. The number of practices adopted per 100 homes was 232 for the former group as compared to 19 practices per 100 homes for the latter group.

Table 13. - Contact with Home Economics Extension Workers as Related to Adoption of Practices - (7 Areas)

Item	Number of homes	Percentage of homes	Percentage of homes adopting practices	Number practices adopted per 100 homes
Homes having contact with any home economics extension worker.......	969	29	79	232
Homes having no contact.	2364	71	13	19

Tables 12 and 13 emphasize the small spread of home economics information outside those who participate in group activities and in this way come into personal contact with home economics extension workers. Influencing large numbers of farm women to accept better practices is dependent upon bringing large numbers of women in touch with home economics extension.

Costs of Means and Agencies in Relation to Their Influence

The data available on costs of extension methods do not separate costs of home economics extension from agricultural extension and from 4-H club work. While the returns per unit of cost from the various means and agencies as measured in terms of all extension work may or may not be entirely true of home economics extension, the standards set up are indicative of the probable efficiency of the various tools employed in extending home economics subject-matter. The ratio of practices adopted as result of the influence of the various methods to their cost is brought out in figure 2. The influence of methods is based on a study of 30,183 instances of adoption of improved agricultural and home economics practices in 39 counties in 14 States. The data on relative costs involve over $9,000,000 of extension funds in 17 States.

News service, circular letters, general meetings, office calls, bulletins and farm or home visits yield greater than average returns per unit of cost. Leader training and method demonstration meetings are just about average, while result demonstrations, correspondence, telephone calls, extension schools, and exhibits are below average in returns per dollar of expenditure.

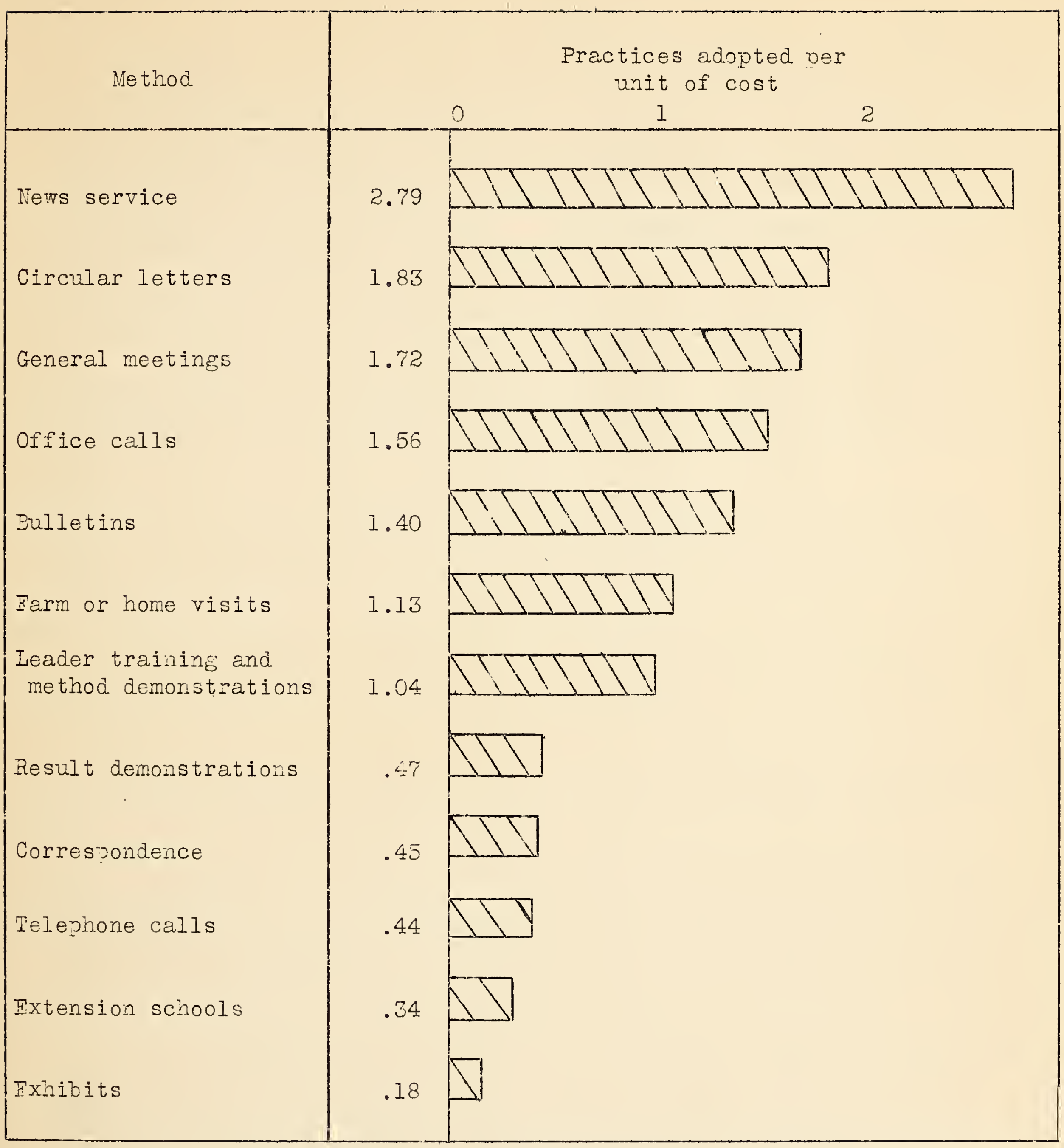


Fig. 2. - Ratio of practices adopted to cost of various methods - all extension
Cost data 17 States - Practices 14 States

In this connection it is interesting to compare figure 3 which shows the time spent on the various teaching tools by home demonstration agents and home economics specialists with the ratios given in figure 2. Time spent on extension methods is closely related to the total cost of these methods.* Method demonstrations and leader training occupy approximately one-half of the time of home economics extension workers and yield but average returns per unit of time and effort expended. Result demonstrations consume one-eighth of the total time and yield less than half the average returns per unit of time consumed.

It would seem that increased accomplishment might result were the emphasis on result and method demonstrations reduced somewhat and increased emphasis placed upon those methods which promise larger returns such as news service, bulletins, circular letters, and general meetings.

Summary

Since village homes as well as the farm homes are interested in home economics extension, the clientele of home economics extension workers is frequently twice the number of farm women residing in a given area.

Studies of farm areas in 15 States indicate that about one farm home out of three has been influenced to adopt better home economics practices. In the two limited studies of village homes the ratio is more nearly one home out of two.

Method demonstrations given by extension workers or by local leaders trained for the purpose were credited with having influenced nearly one-half of the home economics practices adopted.

Land tenure, character of roads, distance from extension office, and age have had little influence upon use of home economics information. Size of farm, educational training, and particularly participation in extension activities and contact with home economics extension workers, seem to be closely associated with changes in home practices.

Home economics extension workers are spending nearly one-half of their time on method demonstrations and leader training. For some reason, possibly the small size of the home demonstration club groups, the training of local leaders to repeat method demonstrations does not seem to be multiplying extension assomplishment as much as had been anticipated. There is urgent need for reaching more farm women now outside the formal groups, possibly more attention to news service, home visits, circular letters, and general meetings would help to accomplish this.

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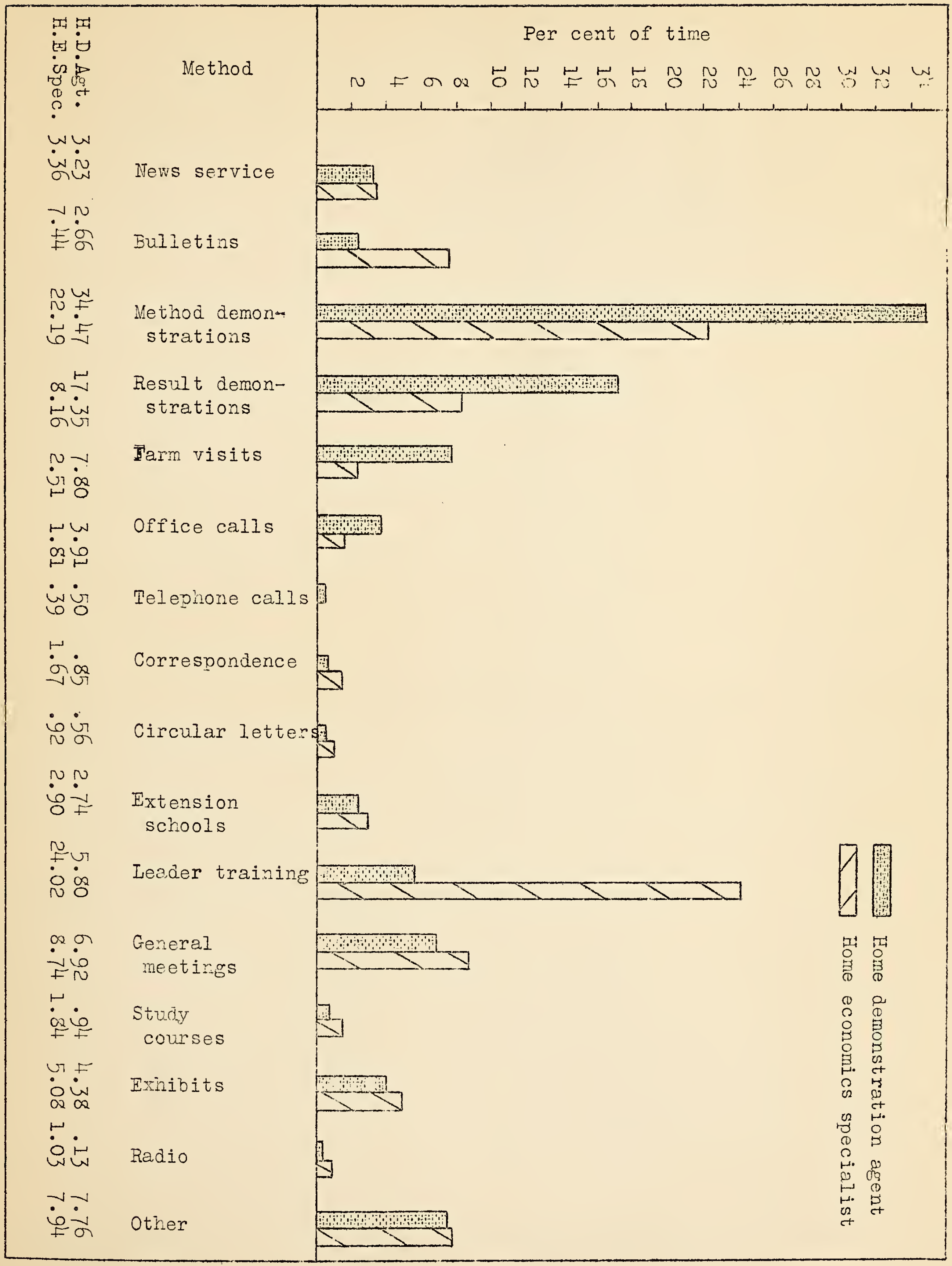
* Relative Costs of Extension Methods which Influence Changes in Farm and Home Practices. U. S. Department of Agriculture Technical Bulletin 125.



Method	H.D.Agt.	H.E.Spec.
News service	3.23	3.36
Bulletins	2.66	7.44
Method demonstrations	34.47	22.19
Result demonstrations	17.35	8.16
Farm visits	7.80	2.51
Office calls	3.91	1.81
Telephone calls	.50	.39
Correspondence	.85	1.67
Circular letters	.56	.92
Extension schools	2.74	2.90
Leader training	5.80	24.02
General meetings	6.92	8.74
Study courses	.94	1.84
Exhibits	4.38	5.08
Radio	.13	1.03
Other	7.76	7.94

Fig. 3. - Percentage of time devoted to methods. Home demonstration agents - Home economics specialists - 17 States.